

# [PULSE WIDTH MODULATION POWER REGULATOR AND POWER SUPPLY SYSTEM THEREOF]

## Abstract

A pulse width modulation (PWM) power regulator and a power supply system thereof are disclosed. The power supply system includes a central controller having a soft-starting circuit and at least one PWM power regulator, wherein the central controller and the PWM power regulator are connected with a control signal wire. The PWM power regulator includes an error amplifier, a comparative circuit, a PWM output stage, a switch and a fault detection circuit. The control signal wire of the invention requires a single control wire to provide a signal for controlling the PWM power regulator. Therefore, the circuit design and the control process of the pulse width modulation (PWM) power regulator and power supply system thereof can be simplified.